

B. Amendments to the Claims

1-13 (canceled).

14 (original): A device comprising:

a component;

a heat sink attached to the component, the heat sink having at least one cutout and having an overhang on all sides of the component; and

a clip in contact with the component and the heat sink, the clip having a polygonal frame and a portion that extends through the at least one cutout, the portion of the clip attaching the component to the heat sink.

15 (canceled).

16 (previously added): The device of Claim 14 wherein:
the overhang is symmetric.

17 (previously added): The device of Claim 14 wherein:
the component has four sides;
the polygonal frame also four sides; and
each side of the polygonal frame is substantially parallel to a corresponding side of the component.

18 (previously added): The device of Claim 14 wherein:
the heat sink has a lower surface attached to the component;
the heat sink has an upper surface opposite to the lower surface; and
the heat sink comprises a plurality of protrusions located on the upper surface.

19 (currently amended): The device of Claim 18 wherein:
a group of said protrusions are located in a central region of the upper surface of the heat sink;
the remainder of said protrusions are located in an outer ~~annular~~ region of the heat sink that is separated from the central region by an inner ~~annular~~ region of the heat sink; and

the inner ~~annular~~ region of the heat sink is devoid of protrusions.

20 (currently amended): The device of Claim 19 wherein:

the polygonal frame of the clip has a lower surface in contact with the upper surface of the heat sink in the inner ~~annular~~ region.

21 (currently amended): The device of Claim 19 wherein:

the polygonal frame has four sides;

the inner ~~annular~~ region of the heat sink also has four sides; and

each side of the polygonal frame is in contact with a corresponding side of the inner ~~annular~~ region.

22 (previously added): The device of Claim 21 wherein:

the polygonal frame has an upper surface opposite to the lower surface of the polygonal frame; and

a thickness of the polygonal frame between the upper surface and the lower surface thereof is smaller than a height of a protrusion in said plurality of protrusions.

23 (currently amended): The device of Claim 19 wherein:

said "at least one cutout" is a round hole located in the inner ~~annular~~ region of the heat sink; and

the clip has a rod with a round cross section that passes through the round hole.

24 (currently amended): The device of Claim 23 wherein:

the heat sink has a plurality of additional holes also located in the inner ~~annular~~ region; and

the clip has a plurality of additional members that pass through the additional holes in the heat sink.

25 (currently amended): The device of Claim 19 wherein:

among the remainder of said protrusions located in the outer ~~annular~~ region of the heat sink, there are at least two rows on at least one side of the heat sink.

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26 (previously added): The device of Claim 25 wherein:
there are at least two rows on all sides of the heat sink, including said at least one side.

27 (previously added): The device of Claim 25 wherein:
at least one of the protrusions in the at least two rows is a cooling fin.

28 (previously added): The device of Claim 25 wherein:
at least one of the protrusions in the at least two rows is a cooling pin.

29 (currently amended): The device of Claim 18 wherein:
the polygonal frame of the clip has an upper surface that is exposed;
the polygonal frame has a lower surface that is opposite to the exposed upper surface;
the lower surface of the polygonal frame is in contact with ~~an annular~~ a first region on
the upper surface of the heat sink;

the polygonal frame surrounds a group of said protrusions located in a central region
of the upper surface of the heat sink; and

the component has an upper surface that is attached to a central region of a lower
surface of the heat sink

30 (canceled).

~~30~~ ³¹ (currently amended): ~~The device of Claim 30 wherein:~~ A device comprising:
a component;

a heat sink attached to the component, the heat sink having an overhang on all sides of
the component, the heat sink comprising a plurality of protrusions located on an upper surface
thereof; and

a clip in contact with the component and the heat sink, the clip having a portion that
extends through an opening in the heat sink, the portion of the clip attaching a lower surface
of the heat sink to the component;

wherein the lower surface of the heat sink is separated from the upper surface of the
heat sink by a distance equal to the thickness of the heat sink;

the device further comprising:

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a group of said protrusions are located in a central region of the upper surface of the heat sink;

the remainder of said protrusions are located in an outer ~~annular~~ region of the heat sink that is separated from the central region by an inner ~~annular~~ region of the heat sink;

the inner ~~annular~~ region of the heat sink is devoid of protrusions; and

the clip rests in the inner ~~annular~~ region and surrounds the group of said protrusions located in the central region of the heat sink.

32 (currently amended): The device of Claim 31 wherein:

among the remainder of said protrusions located in the outer ~~annular~~ region of the heat sink, there are at least two rows on at least one side of the heat sink, and at least one of the protrusions is either a cooling fin or a cooling pin.

33 (currently amended): ~~The device of Claim 30 wherein:~~ A device comprising:

a component;

a heat sink attached to the component, the heat sink having an overhang on all sides of the component, the heat sink comprising a plurality of protrusions located on an upper surface thereof; and

a clip in contact with the component and the heat sink, the clip having a portion that extends through an opening in the heat sink, the portion of the clip attaching a lower surface of the heat sink to the component;

wherein the lower surface of the heat sink is separated from the upper surface of the heat sink by a distance equal to the thickness of the heat sink;

the device further comprising:

said opening is a round hole located in the ~~inner annular~~ a region of the heat sink free of said protrusions; and

the clip has a rod with a round cross section that passes through the round hole.

34 (currently amended): The device of Claim 33 wherein:

the heat sink has a plurality of additional holes also located in the ~~inner annular~~ said region; and

the clip has a plurality of additional members that pass through the additional holes in the heat sink.

35 (previously added): A device comprising:

a component;

a heat sink attached to the component, the heat sink having at least one feature selected from a group consisting of opening and cutout and having an overhang on all sides of the component, the heat sink comprising a group of protrusions located in a central region of the heat sink; and

a clip comprising a polygonal frame that surrounds the group of protrusions on all sides, the clip further comprising a portion that extends through ~~an opening~~ the feature in the heat sink, the portion of the clip attaching the component to the heat sink.

36 (currently amended): The device of Claim 35 wherein:

additional protrusions are located in an outer ~~annular~~ region of the heat sink separated from said group of protrusions by an inner ~~annular~~ region of the heat sink; and
the inner annular region of the heat sink is devoid of protrusions.

37 (currently amended): The device of Claim 36 wherein:

the polygonal frame of the clip has a lower surface in contact with the upper surface of the heat sink in the inner ~~annular~~ region.

38 (currently amended): The device of Claim 36 wherein:

the polygonal frame has four sides;
the inner ~~annular~~ region of the heat sink also has four sides; and
each side of the polygonal frame is in contact with a corresponding side of the inner ~~annular~~ region.

39 (previously added): The device of Claim 38 wherein:

the polygonal frame has an upper surface opposite to the lower surface of the polygonal frame; and

a thickness of the polygonal frame between the upper surface and the lower surface thereof is smaller than a height of a protrusion.

40 (currently amended): The device of Claim 36 wherein:

said ~~opening~~ feature is a round hole located in the inner ~~annular~~ region of the heat sink; and

the clip has a rod with a round cross section that passes through the round hole.

41 (currently amended): The device of Claim 40 wherein:

the heat sink has a plurality of additional holes also located in the inner ~~annular~~ region; and

the clip has a plurality of additional members that pass through the additional holes in the heat sink.

42 (previously added): The device of Claim 36 wherein:

the additional protrusions form two rows on all sides of the heat sink, and each protrusion is either a fin or a pin.

43 (currently amended): The device of Claim 35 wherein:

the polygonal frame of the clip has an upper surface that is exposed;

the polygonal frame has a lower surface that is opposite to the exposed upper surface;

the lower surface of the polygonal frame is in contact with an ~~annular~~ a first region on the upper surface of the heat sink; and

the component has an upper surface that is attached to a central region of a lower surface of the heat sink.

44 (previously added): A device comprising:

a component;

a heat sink attached to the component, the heat sink having at least one opening and having an overhang on all sides of the component;

a clip having a portion that extends through the opening in the heat sink, the portion of the clip attaching the heat sink to the component;

wherein

the heat sink has at least a group of protrusions, the group being surrounded on all sides by the clip; and

the heat sink has additional protrusions that together surround the clip.

45 (previously added): The device of Claim 44 wherein:
the additional protrusions form two rows on all sides of the heat sink, and each protrusion is either a fin or a pin.

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46 (previously added): The device of Claim 44 wherein:
the heat sink has a plurality of additional holes located between the group of protrusions and the additional protrusions; and
the clip has a plurality of additional members that pass through the additional holes in the heat sink.

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47 (new): The device of Claim 19 wherein:
the inner region is rectangular.

48 (new): The device of Claim 29 wherein:
the first region is rectangular.

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49 (new): The device of Claim ³¹~~30~~ wherein:
the inner region is rectangular.

50 (new): The device of Claim 33 wherein:
the inner region is rectangular.

51 (new): The device of Claim 36 wherein:
the inner region is rectangular.

52 (new): The device of Claim 44 wherein:
the clip comprises a rectangular frame.